



## OXIDISED LDL - Test Code 4029



Turnaround Time : 7-10 Business days



Specimen Type: SST Blood

## Description

Oxidised LDL (low-density lipoprotein) contributes to the buildup of deposits on the walls of blood vessels (Khatana et al., 2020). When LDL cholesterol undergoes oxidation due to oxygen radicals, it can lead to arteriosclerosis, a condition that hardens and narrows the arteries. This process triggers the transformation of immune cells called monocytes into macrophages, which then bind to oxidised LDL through specific receptors. As cholesterol accumulates in these macrophages, they develop into foam cells, promoting the formation of atherosclerotic plaques and increasing connective tissue deposition.

Oxidative stress is linked to a higher risk of plaque rupture, which can lead to blood clots and potentially result in a heart attack (myocardial infarction) (Khatana et al., 2020). Additionally, elevated oxidised LDL levels are associated with metabolic syndrome, insulin resistance and untreated hypothyroidism. The 'LDL oxidation' hypothesis highlights the role of oxidised lipoproteins in the development of atherosclerosis (Khatana et al., 2020). It suggests that oxidised LDL and other lipid products may induce inflammation and damage, worsening the condition (Huang et al., 2020). Increasing antioxidant levels through diet or supplements may help reduce oxidised LDL, thereby potentially lowering the risk of cardiovascular disease and improving overall heart health.

## Whats included?

- Oxidised LDL

## Conditions and Symptoms

- Muscle weakness and cramping
- High Blood Pressure
- Numb or cold extremities
- Chest pain
- Shortness of breath
- Fatigue
- Irregular heartbeat

## Complementary Testing

- Cardiovascular Profile Comprehensive 2 (Test code 4027)
- Organic Acids- Metabolomic Mapping (Test code 4041)

## Accreditations Include:

- NATA ISO 15189 – Requirements for Quality and Competence in Medical Laboratories\*
- CLIA – Clinical Laboratories Improvement Amendments\*



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\*See NATA and CLIA website for further details